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Abstract

The theory of the Investment Development Path (IDP) by John H. Dunning suggests that as a country develops, its composition of inward and outward foreign direct investment change both regarding to quantity and type of investment. The theory consists of 5 stages a country passes as its OLI-advantages develop. In this paper we have applied the theory of the IDP on the case of Brazil in order to evaluate if the country has developed consistently with the theoretical framework.

To appoint the position of Brazil on the IDP we use data from United Nations Conference on Trade and Development as well as from the Central Bank of Brazil. We find that though the shape of the Brazilian IDP correlates with the conceptual IDP, the underlying factors causing the shifts in net outward investment (outward direct investment – inward direct investment) are not due to development of the country's OLI-advantages but initially caused by economic reforms and later by global business cycles. Brazil has been a late outward investor which often is the case for large countries. Most of Brazilian outward direct investment has been in the form of M&As by transnational Brazilian companies active in the primary sector. We conclude that the theory of the IDP to very limited extent explains the development of Brazil.

Table of Contents

1. Introduction	3 -
2. Theoretical Background	4 -
2.1 The Eclectic Paradigm – The OLI-Advantages	4 -
2.2 Types of FDI and their Relation to Trade	5 -
2.3 Effects of FDI on the Host Economy	6 -
2.3.1 Horizontal Spillover effects	6 -
2.3.2 Vertical Spillover Effects	7 -
2.4 The Investment Development Path	8 -
2.4.1 Stage 1	8 -
2.4.2 Stage 2	9 -
2.4.3 Stage 3	9 -
2.4.4 Stage 4	10 -
2.4.5 Stage 5	10 -
2.5 Divergence from the Investment Development Path	12 -
2.5.1 Negative Net Outward Investment for Natural Resource Rich Countries, Positi	
2.5.2 The Role of Governments	14 -
2.5.3 Escaping the Vicious Cycle of Poverty and Governmental Strategies	16 -
3. A Brief History of the Recent Political Economy of Brazil	17 -
3.1 The 1980s Debt Crisis	17 -
3.2 Liberalization in the Aftermath of the Crisis	18 -
3.4 Historically about Outward Brazilian Direct Investment	20 -
4. Assessment of the Brazilian Investment Development Path	21 -
4.1 Inward FDI	21 -
4.2 Outward FDI	25 -
4.3 Brazilian TNCs	27 -
4.4 Appointing the position of Brazil on the Investment Development Path	29 -
5. Conclusion	
Bibliography	32 -

1. Introduction

In the international commerce half of all trade consists of trade within firms having activities in several countries, so called intrafirm trade. This rate has never been higher and the amount of intrafirm trade is still increasing faster than other forms of trade. For emerging economies, foreign direct investment, FDI should speed up the industrialization and growth process by diffusion of technology from the foreign firms to the local ones. A theory elaborated specifically for demonstrating the role of FDI, both undertaken by foreign and domestic firms, along a country's development is the Investment Development Path (IDP) by John H. Dunning. In this paper we will apply the theory of the IDP on the emerging economy of Brazil in order to evaluate if the country has developed consistently with the theoretical framework.

The paper is divided into five sections. After this introduction we will in the second section, which constitutes the theoretical framework of the paper, start by explaining the factors behind the existence of FDI, different types of FDI and from an empirical perspective form an understanding of the effects on the host economy. The theory of the IDP, which consists of five stages a country undergoes along its development, is the main subsection of the section. It is followed by a subsection of how country specific factors might cause deviations from the theoretical IDP.

In the third section we shortly present the most important economic events in recent Brazilian history. This section helps us to explain similarities and deviations when we derive and compare the country specific IDP of Brazil and the conceptual IDP which we do in section four. In the last section we evaluate our findings and sum up.

2. Theoretical Background

2.1 The Eclectic Paradigm - The OLI-Advantages

One commonly accepted and illustrative theory behind the existence of foreign direct investment is the Eclectic Paradigm of John H Dunning. With this paradigm Dunning brings forward the transaction cost and the individual firm in an international production framework which explains with which mode of procedure a firm enters a new market. The Eclectic Paradigm consists of three motives, or advantages called ownership, location and internalization advantages (OLI advantages). If the firm possesses all three advantages over external agents the cost for an operation will be lower if it is made internally than if it had been procured externally, thus the existence of foreign direct investment.

The first one, ownership advantages, can be compared to a county's comparative advantages relative other countries. For the individual firm, these advantages over competing rivals include two parts. The first one is intangible assets such as technology and the second one is ownership of complementary assets which facilitate cross-border activities such as marketing and managerial skills. These advantages are firm-specific and considered transferable within the firm and over national borders. Though, if only the ownership advantage is fulfilled, the firm might just as well outsource the production to other firms.

The second, location advantages, constitutes incentives for the firm to locate production abroad when the conditions specific to the foreign market are more advantageous for production than the local one. For example, factors of production and differences in factor endowment and infrastructure might be more favourable abroad. If we assume that the firm possesses a technology which make it unique and competitive (i.e. an ownership advantage as explained above) it will have the incentive to use its technology for production in the foreign market if the conditions there are superior to the conditions in the home market. Otherwise it might have served the foreign market by exports. The location advantages are assumed not to be transferable between borders.

The third, internalization advantages, explains the ability of the firm to implement its activity efficiently using its ownership advantages in combination with the favourable factors in the new market. If the firm posses this advantage, together with the two previous, it will serve the

foreign market by foreign direct investments. If it does not, it does best in selling or leasing its ownership advantage to local firms (Cantwell & Narula, 2003).

Dunning has in several publications applied the OLI advantages in his analysis of international trade. He refers to studies from the 1950's which gave rise to the paradigm and here can serve as an illustrative practical example (Dunning, 2001). At the time the American labour productivity in the manufacturing industry was 2 to 5 times as productive as the British one. To determine if this difference was due to superior resources of the US market or better organization of production Dunning compared productivity between US companies, their affiliates in the UK and UK companies. He found that the US affiliates were less productive than their parent companies but more productive than the UK ones which implies that the higher American productivity can partly be explained by its market specific, and not transferable, factors (location advantages) and partly by its superior way of organize production (ownership advantage). The internalisation advantage was first presented in 1975 and as explained above, it refers to the firm's ability to take advantage of its assets within the firm when operating abroad.

2.2 Types of FDI and their Relation to Trade

From an investor perspective one can distinguish two main types of FDI, horizontal and vertical FDI. Horizontal FDI is defined as investments abroad aimed at production of same or similar products as in the home market. This kind of investments is generally undertaken by firms benefitting from a strong position in the home country and in possession of an ownership advantage such as a patent or strong trademark. For these firms that decide to serve consumers in a foreign market there is a trade-off (the proximity-concentration trade-off) between producing locally (by setting up an affiliate in the foreign market) and to export domestically produced goods. When trade costs together with tariffs outweigh the costs of maintaining production in foreign markets, firms engage in FDI (I e. they serve the foreign market by producing in it). Empirical research supports the theory that firms serve foreign markets by exports when trade costs are low and economies of scale are high (Helpman, Melitz, & Yeaple, 2004). These results imply that trade and horizontal FDI are substitutes.

Vertical FDI can be divided into two parts. The first, backward vertical FDI, is undertaken with the purpose to extract natural resources. This is normally done by firms with ownership advantages such as advanced technology and financial strength which firms in the country where the natural resources is located (location advantage) lack. The second, forward vertical FDI, aimed at reaching consumers in the foreign market, involves for example acquisitions of distribution facilities (Moosa, 2002). Firms mainly engaged in vertical FDI use both exports and FDI as strategies in new markets which would suggest that trade and vertical FDI are compliments (Oberhofer & Pfaffermayr, 2008).

Both horizontal and vertical FDI can take the form as M&As (merger and acquisitions) and greenfield projects. M&As occur when two firms merge, or one firm procures another firm. Horizontal M&As occur when firms in the same industry and at the same level of the production chain merge (or one acquires the other one). The definition of vertical M&As is when firms at different levels of the production chain, but in the same industry, merge. Greenfield projects are defined as investments effected without external involvement. A horizontal greenfield FDI would be a construction of an affiliate for merchandise purposes while a new facility for extraction of natural resources be classified as (backward) vertical greenfield FDI.

2.3 Effects of FDI on the Host Economy

2.3.1 Horizontal Spillover effects

By attracting foreign firms, governments hope that advanced technology, marketing techniques and organizational structures (the foreign firms' ownership advantages) will diffuse to domestic firms. These horizontal (or intra-industry) spillovers take place when foreign firms' activities are observed by local firms and workers are hired and trained with these new techniques. The FDI literature consists of numerous studies on the effects of FDI on the host economy.

By analysing data on all Moroccan enterprises with more than 10 employees from 1985 to 1989 it demonstrates that firms with some foreign ownership have higher productivity though domestically owned firms have higher rate of growth (Haddad & Harrison, 1993). Sectors with

a high level of foreign presence have lower dispersion of productivity between joint venture firms and domestic firms but it is unclear if this is caused by the foreign presence itself.

A study of Bulgaria, Romania and Poland (Konings, 1999) corresponds with the case previously mentioned. In all three countries foreign firms perform better than domestic ones. For Bulgaria and Romania no support for positive spillovers from foreign to domestic firms were found and for Poland Konings found support for negative spillover effects (the competition effect from foreign firms dominates the technology diffusion effect). As in previous studies, Konings point out that the long run effects have not been evaluated.

2.3.2 Vertical Spillover Effects

Multinationals investing in new markets do best in avoiding technology diffusion to local competitors (which they seem to be successful in according to the studies mentioned above). Though, local firms at other levels of the supply chain (potential partners) might be more likely to receive foreign technology since this would lead to improved inputs for the multinationals. These vertical spillover effects, or backward FDI linkages, (diffusion of ownership advantages from one segment to another) seem to have a more positive impact in the host economy.

In Indonesia, the presence of FDI has resulted in gains for both consumers and producers. Local firms benefiting from technology diffusion from foreign enterprises experienced an increase in productivity which led to both lower costs of intermediate and final goods. Consequently, Consumer surplus rose as well as producer surplus for both intermediate and final goods producers (Blalock & Gertler, 2008).

The case of Lithuania (Javorcik, 2004) is consistent with previous study. Between 1996 and 2000 (the study covered 85 % of output in over 20 sectors) A 4 % increase of foreign presence in the contracting sector lead to a 15 % productivity gain in the supplying sector. For sectors where foreign firms were supplying domestic ones no support for vertical spillovers, or in this case forward FDI linkages, were found. Neither, does Javorcik find any significant horizontal spillovers in sectors where foreign and domestic firms are active in the same segment of the economy.

In a development framework this would imply that governments should be cautious of which localization advantages they promote in order to attract the right kind of FDI. The cases show that if foreign firms set up affiliates abroad with the intention to compete with local firms the

probability of diffusion of ownership advantages are less likely to occur and might as well have negative impacts. Instead, if developing countries manage to bring advanced firms by providing subcontractors supplying cheap inputs, it is more likely that these firms will gain from technological diffusion.

2.4 The Investment Development Path

The concept of the Investment Development Path (IDP) is based on the premise that the composition of a country's inward and outward direct investment (of total investment) changes along its economic development. A prerequisite for the application of the theory is that the country's economy is integrated with international capital markets. The IDP consists of 5 stages, each correlating with a level of economic development (commonly GDP per capita). The theory of the Investment Development Path was first presented by Dunning in 1979 and in 1996 an extended version by John H. Dunning and Rajneesh Narula was published (Dunning & Narula, 2006).

2.4.1 Stage 1

Because of poor infrastructure, misdirected government policies, low income per capita and inadequate education of the labour force the domestic market does not have the capacity to produce location-bound assets. As a consequence, foreign investors are mainly attracted by the host country's national assets in the first stage of the IDP. Domestic firms have very few ownership specific advantages relative to firms in investing countries. If there exists any they will be in labour-intensive manufacturing and primary product sector. It is not likely that those firms stand for any significant outward investment.

The most important task for the government in this stage is to create sufficient infrastructure and training for the workforce. Policies in order to help development progress (reducing market failure) should be implemented. This can also involve policies like import protection and export subsidies. However, the technological level of the country's industry does not improve.

2.4.2 Stage 2

In the second stage the domestic market functions work more efficiently and attract more inward direct investment. Foreign firms choose to set up affiliates and use their ownership specific advantages (technology, managerial skills etc.) instead of exporting to the local market. This process might occur if the local government sets up import tariffs for imports. The inward investment will still be concentrated to the natural resource industry but increase in labour-intensive manufacturing industry (of low technology products) if foreign firms decide to invest in upgrading the technology of domestic firms which can be considered as an improvement of localisation advantages.

If government policies of stimulating technological accumulation are successful, more advanced ownership advantages will be generated. These are first accumulated in the sector supporting the primary sector. Firms in the supporting sector will commence using their skills (o-advantages) producing more, though moderately, knowledge-intensive consumer goods which leads to increased outward investment. The increase takes place in two forms, in less developed countries in nearby regions in order to reach new markets with the firms slightly more advanced products and in more advanced countries for acquiring technology. In which extent the outward direct investment will be depends also on the country's trade policies. The net inward investment will though increase during the second stage but starts to converge when domestic firms reach new markets.

2.4.3 Stage 3

Competition amongst firms which are now able to produce standardized goods (which are demanded because of higher incomes) increases. Wages augment as a consequence of improved productivity of labor which makes the country less attractive for investments in labor intensive production.

Domestic firms have through their development acquired new ownership advantages which make foreign firms former advantages relatively weaker. Outward direct investment augment when firms set up affiliates mainly in less developed countries abroad in order to reach markets with their relatively more advanced goods and from which they can export to home market. Inward investment might not necessarily diminish because of the OLI-configuration in the third stage but it will change direction from production using (the former) cheap labor, to more efficient production using the human capital and technology created in the activities set

up by public policies. Foreign firms will also transfer more of their own firm-specific assets from their more advanced markets in order to stay ahead the now more competitive domestic firms.

As well, inward direct investment through acquisition of local assets emerges. This is also done by domestic firms in more developed countries. At this stage there are local firms that have reached the position of multinational enterprises. These firms are now less depending on government polices but some might need help in the investment process abroad. Government may simultaneously attract inward investment for industries lacking significant ownership advantages.

2.4.4 Stage 4

The fourth stage begins when the value of outward direct investment reaches the level of inward direct investment. Thereafter, the value of the former will increase faster than the latter. The cost of capital is lower than that of labour, therefore, the domestic market will consist almost entirely of firms using their created assets in the competition with foreign firms and they are highly capable of penetrating foreign firms' domestic markets.

Inward direct investment is mainly of asset seeking nature from other stage 4 countries. Some inward direct investment from countries at lower stages of development will still take place and is market-, trade- and asset-related.

Outward investment grows when firms' assets lose their competitiveness in home market and they are moved to less developed foreign markets. Firms tend to in larger extent internalize their ownership advantages in order to avoid trade barriers. Consequently, intra-industry production increases which is followed by intra-industry trade. Both take place within multinational enterprises (MNEs) which ownership advantages are similar to each others.

Government policies in the fourth stage aim at maintaining an efficient market by "structural adjustment of its location-bound assets and technological capabilities. Infant industries are supported and industries that have lost their competitiveness are discontinued.

2.4.5 Stage 5

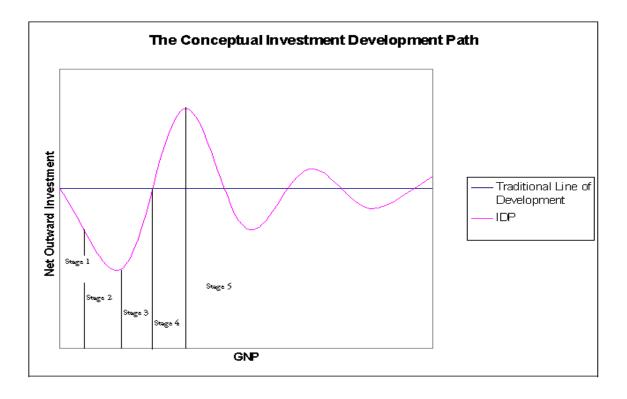
In the fifth stage of the IDP, which advanced industrial nations have reached, most transactions across borders are made within MNEs. When markets and location-bound assets

become similar, investments will be more proportionally distributed (from having a high net outward investment in the fourth stage, a country's position initially falls when entering the fifth stage and will thereafter fluctuate around the zero level).

For MNEs national borders as well as local affiliates lose importance since transactions are conducted within their worldwide operations and not between regional markets. This requires the top management to put more resources on the organization and allocation of its advantages. Fifth stage economies have moved from a situation where countries produce different products based on differences in factor endowment to a situation of economies of scale production of differentiated goods. As a consequence the economic structure of these industrial countries becomes similar. Countries ability to upgrade human and technological capital is crucial for maintaining at the fifth stage of the IDP.

Inward investments are mainly of two kinds, from countries at lower stages on the IDP seeking markets and knowledge and from stage 4 or 5 countries which rationalize their activities. As globalization proceeds, firms improve their O advantages by strategic asset seeking investments in forms of cross-border M&As or strategic alliances.

Figure 1: The shape of how a country's IDP theoretically should look like



Source: (Dunning & Narula, Foreign direct investment and governments: catalysts for economic restructuring, 1996)

2.5 Divergence from the Investment Development Path

Dunning and Narula point out that the IDP is based on the Eclectic Paradigm. Many studies on how development has an impact on inward and outward direct investment have been presented over the last three decades and some findings provide new approaches to the theory. One important comment to be made is that there are other variables than development that influence a country's position on the IDP. Amongst the most important ones are the type of FDI undertaken, the structure of countries' resources and their macro-economic and organizational policies implemented by their governments.

If strategic asset acquiring exists in a larger extent (into which there has been little research) the IDP should be flatter. This because inward direct investment is higher (than earlier

presumed) in industrialized countries since developing country firms aim at acquiring O specific advantages in more advanced markets. I.e. the difference in net outward investment, NOI (outward investment minus inward investment), between developed and less developed countries should be smaller.

In research from 1981, 1986 and 1988 Dunning finds that industrial countries had higher levels of outward direct investment at any given level of GNP per capita than the natural resource-based countries.

Governments have by their policies (e.g. liberalization, deregulation) a powerful influence on the profile of its IDP which several country case studies confirm. Countries that aim meeting the demands of the international market are more likely to engage in cross-border transactions, e.g. FDI, than those promoting self-reliance. Consequently, the relationship between FDI and income level might vary at different points of time due to changes in governments trade policies. It is also likely to fluctuate according to the direction and character of technological advances and the country from which they originate.

Dunning and Narula also stress that an empirical analysis of the IDP has limitations because of the changing relationship between firms and countries. One problem occurs in stage five where firms' activities are not only dependent on the economic activities in their countries of origin but in every country they operate. Their advantages are more O specific then L specific the more international the firms are. Therefore, stage 5 countries will experience change in their NOI position which is not correlated with its development.

Each country's circumstances are unique and even though countries to some extent can be grouped, a cross-sectional analysis of a larger amount of countries would not be consistent with the theoretical framework since paths divert depending mainly on three factors; the composition and nature of its created and natural assets, market characteristics, and how governments operate.

2.5.1 Negative Net Outward Investment for Natural Resource Rich Countries, Positive for Small Countries

A country might reach the state of a developed economy through its natural resources if these constitute a near absolute advantage for the country. Then firms will use their O specific advantages to exploit these resources. MNEs will stand for investments and use the countries natural resources in their upstream activities. As explained earlier, this process develops the

country's other L advantages (e.g. labour). Higher skilled labour force will lead to investments in upstream activities by both domestic firms and MNEs. As a result a comparative advantage in a natural-resource-based industry may be sustained even with higher income level and NOI will still be negative. Outward investment will be in either the primary sector or in related industries (which have been the case for Australia).

Though, this process does not automatically start once multinationals commence extracting natural resources in the host country. For many countries hosting FDI in the natural resource sector this take off has still not begun. A study of US affiliates in Sub-Saharan Africa (Asiedu, 2004) shows that natural resources alone do not have as significant impact on employment that can promote development in other sectors as infrastructure and literacy. A 1 % increase in infrastructure leads to a 0.3 % increase in employment rates. The impact of literacy is a 0.02 % increase. The implication of these results is that decent infrastructure and human capital is required for multinationals to employ in growth promoting sectors.

A lack of natural resources results in the opposite effect. Outward investment commences earlier to secure access to natural resources. Such a country is also likely to begin strategic asset seeking investment at an earlier stage. These countries become net outward investors at an earlier stage (e.g. Japan)

Small countries which lack economies of scale and natural resources often experience inward foreign direct investment in an early stage of their development. Domestic firms will seek market access abroad and, as income level rise, low wage human capital. Such countries, like Switzerland and Singapore, often reach a positive NOI in an early stage of development. Large countries experience the opposite scenario since foreign firms are attracted to their large markets and domestic firms achieve economies of scale at home.

2.5.2 The Role of Governments

The dynamics of the natural/created asset evolution are primarily determined by those associated with the economic, social and political environment issues that are generally a direct result of the action of governments. Since the role of government is different in every country it is hard to translate policies into a general variable or to group countries into distinct groups according to roles of governments.

Though, two main issues primarily influence the dynamics of created asset development. First, the economic orientation of a country which can be either outward looking, export orientated

(OL-EO) or inward looking, import substituting (IL-IS). An OL-EO system promotes a faster development and progress through the IDP but the policies are not implemented before the third stage (see earlier discussion). IL-IS countries have relatively little inward and outward FDI activity.

Most economic development theories support the OL-EO orientation as the best way for developing countries to catch up though this implies some prerequisites. Abramovitz was the first one to come up with the catching up hypothesis (Abramovitz, 1986) According to this hypothesis a country that is exposed to superior technology from a trading partner or foreign investor will eventually catch up as this technology diffuses to the home economy. The more a country lags behind the leading nation (here, the most technically advanced) the higher growth rates it will experience. But for this to happen, the host country must possess enough, as Abramovitz calls it, "social capability". It can be problematic to measure a country's social capability. He mentions years of education and quality of institutions as measurable proxies but a trade-off between specialization and adaptability is possible where a country's economy is design to fully exploit the capability if its existing technology versus a economic organization more adaptable for change. Other factors (these are related to FDI and trade) determining the social capability are openness to competition, establishment of new firms and how the goods and services are traded.

To illustrate the catching up hypothesis in a social capability framework Abramovitz has carried out a study on the productivity level of some countries related to the productivity level of the US (the leading technological nation for most of the time) for nine year between 1870 and 1979. Though some limitations of the study are pointed out, the general picture provided is interesting. The period before 1913 was characterized by a continued importance of agriculture and early state of industrialization which made productivity levels dependent on the quality of farmland in relation to population. Besides, qualified labour to exploit advanced technology from leading nations was scarce. Therefore, productivity levels remained intact.

The period during and after WW1 did not bring any convergence due to the financial conditions and trade restrictions. Between 1938 and 1950 the productivity gap to the US increased. It was not until the period after WW2 that the prerequisites of catching up were fulfilled. First, since the gap between leader and followers was huge, the latter's growth rate potential should be high. Second, the level of social capability was higher due to higher education and knowledge of large-scale production, distribution and finance. Thirdly, the

economic and political landscape transformed. Governments more actively promoted growth by facilitating technological development, opening up markets and favouring investments.

FDI was during the 1990s considered positive for growth whereupon international commerce related policies were liberal. During this decade only between 1 and 2 % of all policy changes were negative towards FDI (higher taxation, removal of subsidies, nationalisation). In 2005 the rate had increased to 20 % which is in line with recent empirical studies (and Abramovitz's conceptual explanation). Summer (Summer, 2008) analyses the results of 24 of these studies (from 1994 to 2006) and draws the conclusion that there are prerequisites, such as human capital, required for FDI to lead to growth. Also, FDI seems to have been more beneficial under less liberal FDI policies.

Summer points out "connectors" as another potential contributor to the change to more restrictive FDI policies. Connectors are both governmental and non-governmental actors involved in the policy-making process, networks of experts and groups off actors on a single issue (e.g. lobbies). Many of these are both critical to FDI and have a strong influence on the politics of trade and investment. Like UNCTAD which is critical to policy makers too loose on FDI and declares that it is hard to prove that FDI promotes growth in developing countries (Nunnenkamp & Spatz, 2004).

2.5.3 Escaping the Vicious Cycle of Poverty and Governmental Strategies

The vicious cycle of poverty often prevents countries from proceeding to the third stage because low income makes it hard to save and invest. If one refers to the eclectic paradigm, one would say that the lack of ownership advantages (here financial assets are included) and good infrastructure (L advantages) are the two critical factors. Though, the vicious circle can be broken through inward FDI, which allows for technological spillovers and financial capital.

Second, policies associated with a particular system can vary between countries with the same economic system and at the same stage of development. There are two main areas of government strategy that affect the IDP, macro-economic and macro-organizational strategy. Macro-economic policy is relatively well defined and often associated with the economic system but macro-organizational strategy influences the structure and organization of economic activity and should in an ideal situation change as the economy evolves. E.g. government plays a market facilitating role to avoid market failures. Increased economic specialization associated with economic development leads to growth in market failure which

motivates change in government macro-organizational policy. Since governments may fail, society is often faced with a choice between imperfect market and imperfect government. Of course, there is no general agreement about what the policies should be like, therefore, they vary widely amongst countries even at the same stage of development which affects the IDP.

3. A Brief History of the Recent Political Economy of Brazil

In this section we will briefly present the recent economic history of Brazil. Since FDI data is not available for years prior to 1970 and Brazil accounted for very low levels of both inward and outward FDI up to the 1990s, we start from the years proceeding the Latin American Debt Crisis.

3.1 The 1980s Debt Crisis

Brazil's combination of low savings and poorly developed capital markets meant that there were insufficient funds to finance the domestic investments and consumption during the structural crisis in the 1970s. In contrary to many, but not all, developed economies the Brazilian government kept an expansive policy, choosing to finance deficits with international loans, and in turn maintaining some international demand of money (Schön, 2000). From the perspective of the rich developed countries which now experienced a surge in liquidity, due to the OPEC money being invested in western banks, Brazil and other Latin American countries offered a wide range of investment opportunities¹. As a result, Brazil received a lot of the funds

¹ On top of that, the high level of inflation made sure that the real interest rates in the developed countries were very low, or even negative.

that were made available in the western financial institutions, but the risk of those investments was heavily underestimated. At the dawn of the crisis there were many reasons to why Brazil could not raise enough funds to service their debt.

In order to stimulate the export sector and reduce imports the Brazilian government initially increased their control over foreign commerce and payments, in combination with a domestic policy that brought on severe inflation (Schön, 2000). At the same time, the financial market of Brazil offered a relatively limited range of investment opportunities and was subject to a rather rigid government control. In the beginning of the 1980s there were still extensive controls over both the inward and outward flows of capital, substantially raising obstacles to FDI (Carvalho, 2008).

3.2 Liberalization in the Aftermath of the Crisis

In the aftermath of the 1980s debt crisis Brazil began to liberalize its capital market. To a great extent the liberalization was forced upon the country as a mean of working out the crisis, but also as a position against the corrupt Brazilian government. The management of the crisis consisted of substantial external pressure from the IMF, which insisted on capital account liberalization, and the Baker/Brady plan. The standpoint of the Baker/Brady plan was that debtor nations were supposed to solve their debt service problems by undertaking market based structural reforms, cuts in government spending and relaxation of regulations on inward foreign direct investment (Pilbeam, 2006).

The financial liberalization began in 1988 with a banking reform that signalled a governmental approval of a change that had already been going on in the financial sector for quite some time. The liberalization act gave the banks a formal approval, allowing financial institutions to diversify and organize as universal banks. Above that, the reform helped to "relax" most interest rates and gave the Central Bank monopoly in creating money. Extensive capital controls (characterizing the 1970s) were relaxed to some extent.

At the same time the catastrophic economy of the government, due to the debt crisis and high inflation, forced privatization of many previously state controlled markets. It was not an ideological breakthrough as much as a way to allow for the government owned sectors to survive the facing bankruptcy of the Brazilian state (Carvalho, 2008). Foreign direct investment was further liberalized as prohibitions of FDI to certain parts of the economy were abolished at the same time as bureaucratic obstacles were significantly reduced.

In 1991 the Brazilian government made it possible for foreign investors to acquire equities of domestic firms. That was followed by a substantial liberalization of capital outflows in 1992, which made it easier for foreign financial institutions to operate their activities with foreign currencies (Faria (de), Paula (de), Castro Pires, & Meyer, 2009).

The "Real Plan", launched in 1994, cut inflation and stabilized the currency (the newly implemented peso). The same year agreements within the Mercosur trade union were signed by the member states Argentina, Brazil, Uruguay and Paraguay to increase the regional integration and create a common market. As a result, Brazil's average import tariffs fell from 32 % in 1990 to 14 % in 1994.

Sub-national governments competed for investments in the framework of the Brazilian government's intensive-based competition policy in order to stimulate regional manufacturing. Regional governments offered fiscal as well as financial offers to investors (mainly foreign). The fiscal offers were normally larger than the financial ones and consisted of periods of exemptions of state sales-tax and municipal taxes. The financial aids included industrial sites and infrastructure. The offers were massive which gave rise se to debate within parliaments. Big Auto companies received valuable grants for their creation of jobs (Christiansen, Oman, & Charlton, 2003).

During the privatization it was uncertain how Brazilian companies would survive in the global competition. Domestic obsolete capital stock and insufficient access to international financial services are considered to have left Brazilian companies unprepared for global competition which made them targets for competitive foreign firms seeking new markets. Public companies, especially in infrastructure, were privatized and foreign firms were highly represented among the purchasers. In 1996 and 1997, 27 % of FDI inflows consisted of foreign capital procuring former state owned companies of which 42 % were in the electronics industry and 19 percent in cellular telephone networks industry (United Nations Conference on Trade and Development, 1998).

After the currency crisis in 1999 and the adoption of a floating exchange rate regime, there were several liberalization policies implemented to boost FDI. There was greater flexibility in the foreign exchange market, abolishment of the minimum average maturity for external loans and the financial transaction tax on capital inflows, and restrictions on foreigners ability to invest in the securities market were removed (Faria (de), Paula (de), Castro Pires, & Meyer, 2009). Initiatives to liberalize the capital market were stimulated far into the 21th century but some of the liberalization reforms of the 1990s have been abolished. As of today, there are still controls on capital inflows, and the authorities monitor capital outflows.

In 2000, like most economies, Brazil was hit by the economic crisis (triggered by the burst of the dot-com bubble). As a consequence of the following decrease in economic activity, global FDI inflows fell by 51 % in 2001 (United Nations Conference on Trade and Development, 2002).

Although the debt crises resulted in looser government control and reduced spending, privatizations, and deregulations of the capital market the reforms always institutionalized as an answer to a short term specific problem. That is, the reforms were mainly constructed to solve a temporarily problem, instead of as a substantial change in governmental policy. Hence, we contemplate that some of the previous reforms now are abolished by short term interest of the Brazilian government (Carvalho, 2008).

3.4 Historically about Outward Brazilian Direct Investment

Investments by Brazilian companies abroad started in the 1970s when banks, engineering service firms and Petrobrás (an energy company) expanded their activities to bordering countries. During the 1980s trade agreements motivated Brazilian companies in the auto parts and electrical industry to set up production facilities in Argentina. Regionally, outward FDI flows soared in the 1990s as a consequence of deregulations, privatizations and trade liberalization followed by the outward oriented economic strategies many Latin American countries undertook during the period. In general, the ownership advantages of the region's transnational firms are marketing- and management related (efficient quality and production

management) as well as characterized by access to financial resources. Another ownership advantage Latin American firms benefit from when investing regionally is the capability to work in cultures similar to their domestic market (United Nations Conference on Trade and Development, 1999).

At this point, the larger corporations of Latin America, including those in the advanced technological sector had not managed to accumulate technology in order to become innovators in skill-intensive industries the way Asian companies have been so successful. Most outward investment was directed to other developing countries and to services and resource-based industries in more traditional sectors. In a globalization framework, these corporations were also faced by tougher competition from TNCs from other regions which suggests that they, in order to survive, would be forced to expand their activities to benefit from economies of scale and strengthen their competitiveness. Though, the cost of acquiring financial, human and technological assets was relatively higher for Latin American firms (due to their small size) compared to their competitors. This disadvantage is considered derived from small domestic capital market, an educational system not adapted for training the human capital needed for the competitive global economy as well as inadequate infrastructure.

4. Assessment of the Brazilian Investment Development Path

In this section we will look at data on foreign direct investment for Brazil and explain the factors behind the fluctuations of inward and outward investment flows. By also analysing to which sectors flows are directed we will decide which stage the country has reached and where it is heading.

4.1 Inward FDI

First we examine how inward FDI flows have evolved from 1970, the first year data is available.

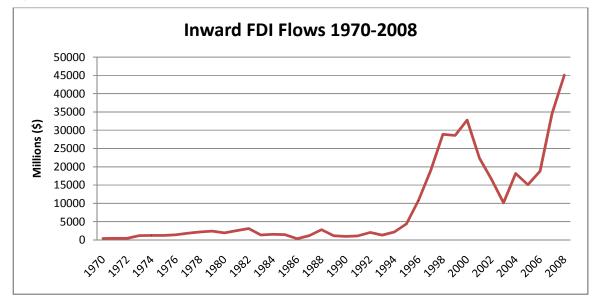


Figure 2: Flows of inward FDI to Brazil 1970-2008

Source: www.unctad.org (United Nations Conference on Trade And Development).

The restriction of foreign investors (see section 3) naturally had its impact on inward FDI. Inflows remained at low levels from the first year data was available up to the liberalization in 1994. Though, the trend was positive from 1970 up to 1982 when the economic crisis put off investors. Inflows decreased while exports increased as a consequence of weaker domestic market.

As the implementation of the "Real Plan" turned out well, inflows towards never before seen levels took off. Macroeconomic stability together with a more open economy and privatizations attracted foreign firms to several kinds of investments. Of the 600 M&As that took place between 1992 and 1997 61 % were foreign purchasers and mainly directed towards the manufacturing sector of which the largest industries were food and beverage, metallurgy, electrical machinery and pharmaceuticals (Christiansen, Oman, & Charlton, 2003).

Though most developing countries experienced less dramatic falls than the developed world did, inflows to Brazil dropped from \$33 billion in 2001 to \$10 billion in 2003. The sharp declination can in part also be attributed to a return to levels of privatizations before the implementation of the "Real Plan" due to completion of programs as well as public resistance

provoked by unfulfilled expectations and criticism of TNCs (transnational companies) strong influence (United Nations Conference on Trade and Development, 2004). Another factor behind the decrease in inflows was low annual growth for Brazil and other Latin American countries throughout the period which was the result of tight fiscal and monetary policies.

In 2004, as the global and Latin American economies recovered, increased Brazilian growth and domestic demand attracted market-seeking FDI mainly to the manufacturing sector. Though, inflows to the service sector only recaptured moderately and attracted lower inflows than the manufacturing sector (United Nations Conference on Trade and Development, 2005).

Apart from the region as a whole, inward FDI flows to Brazil decreased in 2005 due to lower values of M&As and an appreciation of the Real which is suggested to have discouraged investors from export-oriented FDI (United Nations Conference on Trade and Development, 2006). In 2007 inflows almost doubled from previous year. Both the mining industry in the primary sector and natural-resource-based manufacturing were attributed large increases (United Nations Conference on Trade and Development, 2008).

Though global inflows decreased in 2008 by 14 %, inflows to Brazil reached an all time high (which is another indication that Brazil was not hit to any larger extent by the economic crisis that began the same year). As in previous year it was the primary- and manufacturing sectors that stood for the largest increases despite lower commodity prices. Inflows to the former tripled which made the sector representing 34 % of total inflows. While the manufacturing sector the same year accounted for 35 % (of which 80 % was related to natural-resource- based industries). The global financial situation seems to have restrained investors from acquisitions in the service sector (especially in the financial industry) which triggered domestic banks (which were less affected by the crises due to lower exposure to toxic assets) to expand (United Nations Conference on Trade and Development, 2009).

FDI Inflows by Sector 2001-2008 18000 16000 14000 12000 Millions (\$) 10000 ■ Primary 8000 ■ Secondary 6000 ■ Tertiary 4000 2000 0 2002 2001 2003 2004 2005 2006 2007 2008

Figure 3: Inward FDI by sector 2001-2008

Source: www.bcb.gov.br (Banco Central Do Brasil).

Like we have previously observed, figure 3 also shows that inflows have decreased from 2001 to 2003 (though not to the same extent as the UNCTAD data demonstrates). Flows to the service sector stands for the largest decrease during these years. BCB also holds data on industry level which reveals that the sectors that experienced the largest decreases of inflows from 2001-2003 are gas and electricity, post and telecommunications as well as financial intermediation. At least the two formerly mentioned sectors are traditionally characterized by public ownership which supports the UNCTAD information that a halt of privatization programs limited inflows to formerly state controlled industries. In the manufacturing sector the increase in 2002 is mainly due to large inflows to the food and beverage industry while the decrease in 2003 is due to low inflows to the production of electronics and communication equipment industry.

The large inflows to the manufacturing sector in 2004 can almost entirely be attributed the food and beverage industry (up from \$409 million in 2003 to \$5346 million in 2004). Larger flows to several industries constituted the increase in the service sector. Like in previous years inflows to the primary sector remained relatively (compared to the other sectors) low.

During the period from 2005 to 2008 flows to all sectors increased. The high levels of inflows to the primary sector in 2007 and 2008 can entirely be explained by flows to the extraction of metallic minerals industry. Metallurgy (natural resource related) accounts for the steady

increase to the manufacturing sector throughout the period and to the service sector various finance related industries stand for the increase.

4.2 Outward FDI

As for data on inward flows, data on outward flows are available from 1970 to 2008.

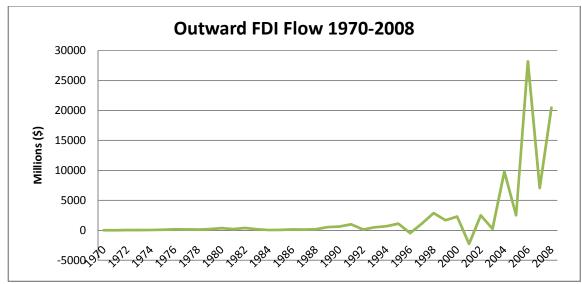


Figure 4: Flows of outward FDI to Brazil 1970-2008

Source: www.unctad.org (United Nations Conference on Trade And Development).

Outflows remained at low levels throughout the 1990s with the exception of 1998-99 when flows temporarily increased. Still, even though Brazil had one of the lowest levels of outward FDI as share of GDP amongst the most developed Latin American countries (United Nations Conference on Trade and Development, 1999).

While inward investment flows decreased during the 2000 financial crisis, outward investments never got the chance to take off in the beginning of the 21th century. In 2001 outward flows were even negative since firms brought capital home to cover for domestic deficits.

Despite recovery in 2004 FDI outflows from South America grew by only 3.6%. Brazil, which involvement in outward investment so far had been modest, stood for \$9.5 billion of the regions \$11 billion worth of outflows. In 2005, outflows for South America increased 5 % to almost \$12 billion (for for the whole Latin American and Caribbean region outflows reached \$33 billion, an increase by 19 %, of which the offshore financial centres accounted for \$14 billion and Mexico, this year the region's largest investor, accounted for \$6.2 billion). Brazilian outflows (\$2.5 billion) returned to 2001 and 2002 years levels making Colombia the largest South American Investor 2005 (United Nations Conference on Trade and Development, 2006).

In 2006 Brazil regained the position as South America's as well the whole Latin American largest investor accounting for \$28 billion worth of outward direct investment flows (Mexico, the second largest, accounted for \$5.8 billion). This was the country's highest level ever and for the first time outward flows exceeded inward flows. The single most important contribution was a \$17 billion takeover of the Canadian nickel producer Inco by the mining company CVRD. In 2007 Brazil and Mexico once again swapped places as the largest respectively second largest investor. Outflows abated to \$7 billion (while they increased to \$8.3 for Mexico) from the previously high level in 2006.

The aftermath of the financial crisis in 2008 had interesting effects on the global distribution of FDI. For developed countries both inflows and outflows decreased (by 29 respectively 17 % on year previous and even more the first half of 2009 compared to six months earlier). While outflows from Central America and the Caribbean decreased by 22 % (down to \$0.7 billion for Mexico), outflows from South America increased by 131 %. For Brazil, once again the region's largest investor, outflows increased by 189 % to \$20 billion. Intercompany loans from mother companies to underperforming affiliates abroad as well as new acquisitions of mining and natural-resource-based industries seems to be the reason for the sharp increase (United Nations Conference on Trade and Development, 2009).

Data on outward FDI on sector level is only available from 2006 to 2008 (Figure 5).

FDI Outward Flows by Sector 2006-2008 18000 16000 14000 Outflows, Millions (\$) 12000 10000 Primary 8000 Secondary 6000 Tertiary 4000 2000 0 2006 2007 2008 Year

Figure 5: Outward FDI by sector 2001-2008

Source: www.unctad.org (United Nations Conference on Trade And Development).

The take-over of Inco by CVRD accounts for almost all primary sector related outward FDI during the period. Both the manufacturing and the service sector accounted for increases in 2007 and 2008. In the former, flows to metallurgy industries were high in both 2007 and 2008 (\$1660 million respectively \$4118 million) as well as foodstuff while in 2006 several clothing related industries accounted for higher outflows than the following years. In the service sector financial and holding industries received the major part of the outflows during the period.

4.3 Brazilian TNCs

Since current data on destination of Brazilian FDI is of limited accessibility we examine instead the activities of the country's largest TNCs and where they have directed their investments. Though Brazil recently has accounted for impressive levels of outward investments the country's TNCs are modestly globalized even in comparison with some other developing countries. In 2008 Brazil did not have any TNC amongst the world top 100 non-

financial TNCs (ranked by foreign assets). Amongst the top 100 TNCs from developing countries three were Brazilian (of which Companhia Vale do Rio Doce, CVRD, number 12, was the largest of them, mainly due to the \$17 billion acquisition of the Canadian company Inco Ltd in 2006), all in natural-resource-related industries, while Mexico had five on a list dominated by Asian companies.

Table 1: Largest Brazilian companies ranked by foreign assets 2007

Rank (amongst			Foreign Assests	Total Assets
Developing Countries)	Company	Industry	(\$ millions)	(\$ millions)
	Companhia Vale do	Mining &		
12	Rio Doce	quarrying	18 846	76 717
	Petroleo Brasileiro			
14	S.A. – Petrobras	Petroleum	11 674	129 715
	Metalurgica Gerdau	Metals and		
28	S.A.	metal products	7 372	12 974

Source: WIR 2009 (United Nations Conference on Trade and Development, 2009)

In order to see to see to where Brazilian outward FDI is directed we look at the largest M&As taking place by Brazilian companies during the 21th century as well as the single year of 2008.

Table 2: Largest Cross-Border M&A Purchases by Brazilian Companies 2008

Rank (Latin	worth (\$	Acquired	Host	Acquiring		% of
America)	millions)	Company	Economy	Company	Industry	Shares
			United			
1	1749	Quanex Corp	States	Gerdau SA	Steel works	100
3	944	LWB Refractories GmbH	Germany	Magnesita Refratarios	Brick and Structural clay	100
				J&F		
		Smithfield Beef	United	Participacoes		
4	565	Group Inc	States	SA	Beef cattle	100
				J&F Participacoes	Prepared meat	
8	425	Inalca SpA	Italy	SA	products	50
			United	Grupo	Secondary nonferrous	
10	295	US Zinc Corp	States	Votorantim	metals	100

Source: WIR 2009 (United Nations Conference on Trade and Development, 2009).

The value of these M&As constituted almost 20 % of total outward FDI 2008 (based on UNCTAD data). We note that all five are of horizontal M&A (see 2.2) which indicates that

they are of market seeking character. It is interesting as well that in all cases the source of destination is a developed country which hints that asset seeking motives (likely production technologies, organizational techniques etc.) might have been involved in the acquisition process. By referring to part 3.4 (that the future of the larger Brazilian companies' independence was uncertain due to increased global competition) one can now declare that at least some managed to become TNCs.

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4.4 Appointing the position of Brazil on the Investment Development Path

In this chapter we will primarily derive the Brazilian IDP (by subtracting outward FDI from inward FDI).

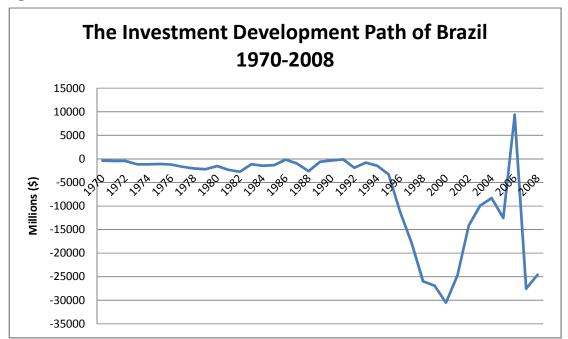


Figure 6: Brazilian net outward direct investment (outward - inward direct investment) 1970-2008

Source: www.unctad.org (United Nations Conference on Trade And Development).

When comparing Figure 6 with the conceptual IDP (Figure 1) we find rather strong correlation. Though, according to the theory of the IDP the fluctuations in NOI are due to configuration of the country's OLI-advantages. In table 3 we present data of indicators that should appoint

Brazil's level of development. We also summarize our previous findings regarding FDI flows which we will compare with the development indicators in order to tell if Brazil has developed in accordance with the theory of the IDP.

Table 3: Indicators of development and FDI summary of Brazilian FDI

Indicators/Period	1970-1993	1994-1999	2000-2003	2004-2008
Political and Economic Situation	Extensive Restrictions on capital flows	Liberalization and Privatization	Global Downturn	Global Recovery
Growth Level ¹	Fluctuating	Average: -0.5 %	Average: 1.2 %	Average: 3.5%
Structure of the Economy (% of GDP) ²	1987: Agriculture 10 % Industry 46 % Services 44 %	1997: Agriculture 5.4 % Industry 26.1 % Services 68.5 %		2007: Agriculture 4.9 % Industry 30.6 % Services 64.5 %
Value of primary product export /value of manufacturing exports ³		Average: 0.86	Average: 0.84	Average: 0.91
Inward FDI	Low levels	Sharp increase, mainly in the manufacturing sector	Decrease, mainly in the service sector	Increase in all sectors
		Low, small increase by the		Sharp increase in manufacturing and services, 1 large M&A in the primary
Outward FDI	Insignificant	end of the period		sector

Source: 1: IMF (International Monetary Fund), 2: World Bank (World Bank) 3: (United Nations Conference on Trade And Development)

The period from 1970 to 1993 resembles the first stage of the theoretical IDP (which is characterized by low levels of inward FDI). According to the theory, a country at this stage does not possess the ability to exploit its own resources and lack any significant demand. This is not the case for Brazil which at this point has both a relatively large industrial sector as well as a large service sector. The low levels of inward FDI can instead be explained by restrictions for foreigners to invest in Brazil.

In the next period (1994-1999) the service sector constitutes 68.5 % of GDP and the value of exported manufactures is higher than the value of exported primary products which indicates a relatively high level of development. Though, Brazilian firms did not undertake any extensive FDIs while inward FDI increased sharply triggered by the liberalization of capital markets and privatization of state-owned companies. The reason for low levels of outward FDI can be explained by the fact that Brazil is a large country and its firms compete for local dominance

before investing abroad. Another factor might be that Brazil did not possess enough social capability to develop ownership advantages (which is necessary for FDI) by its own or absorb them via diffusion of technology from foreign firms.

In the beginning of the 21th century the composition of exports remains intact. Brazilian outward FDI does not take off which supports the theory that the countrys' firms have not managed to develop their own ownership advantages. Inflows decreases due to halt in privatizations.

In the period characterized by global recovery Brazilian outward FDI finally rises. This is to large extent done by horizontal asset seeking M&As mainly in natural-resource-related industries in relatively more developed countries. Some Brazilian firms have taken the step to become global enterprises which is significant for a country in the third stage of the IDP. The share of services as % of GDP decreased and the export ratio shows a relative increase in primary products. This can be explained high levels of inflows where the increase was relatively higher in manufacturing and the primary sector.

As previously mentioned in this chapter, the configuration of a country's OLI-advantages leads to shift in NOI. I.e. FDI is dependent on the OLI-configuration not the other way around. In the case of Brazil there is no indication of any major configuration during observable time. The countries localization advantages are a large market and natural resources while its ownership advantages are in extraction and management of these resources. The fact that the Brazilian NOI-curve from 1970 to 2008 resembles the conceptual IDP is a coincidence and caused by factors such as politics and global business cycles.

5. Conclusion

In this paper we have analyzed flows and composition of Brazilian inward and outward foreign direct investment in order to evaluate if these have been configured over time accordingly to the theory of the Investment Development. We find that though the shape of the Brazilian net outward investment graph corresponds with the conceptual IDP, the underlying factors causing

the appearance do not. Country specific factors such as endowment of natural resources, country size and economic policies have contributed to the fact that Brazil has been a late outward investor. Though, we consider reforms of the country's political economy to have been the principal trigger for both inward and outward Brazilian FDI.

Even though Brazil recently has experienced high levels of growth its technological development seems to lag behind. The diffusion of technology from foreign to domestic firms might not have occurred to the extent the country has hoped for. Brazil's main comparative advantage is still in natural resources and those few companies which have become global players are all active in the natural resource sector.

The theory of the investment development path presupposes free capital markets, openness to trade and a discreet government with mainly a role as provider of infrastructure and working institutions. This is rarely the case, at least for less developed countries which governments often have an active role in the economy and are often holders of the endowments of natural resources. Therefore, it is not to be taken for granted that neither Brazil nor other developing countries will develop accordingly to the theory of the investment development path.

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